The Rehab/Transit Option: A Better Solution for Milwaukee's East-West Corridor

A report to WISPIRG by:

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25 November 2014

About the Author

Mark Stout is an independent transportation consultant and is principal of Mark L. Stout Consulting. His consulting practice addresses a wide range of transportation policy issues, including state and federal funding challenges, climate change, organizational transformation, and Smart Growth planning. His clients include state transportation departments, national and state nonprofit and advocacy groups, and metropolitan planning organizations. His recent work includes providing strategic planning advice to a state DOT; directing a regional multimodal strategic land development plan for a local government; coaching a medium-sized MPO in setting up a Smart Growth transportation program; providing policy support for a national transportation reform group, including making recommendations for supporting state DOT transformation in reauthorization legislation; helping state DOTs to collaborate with environment and energy agencies on a regional basis in addressing transportation and climate change issues; and coaching several state advocacy groups in the skills needed to engage state DOTs in project selection and capital programming.

Dr. Stout previously served more than 25 years with the New Jersey Department of Transportation. As Assistant Commissioner for Planning and Development he was responsible for the divisions of planning, capital programming, project development, local aid, freight services, aeronautics, and environmental resources. His accomplishments included leading the development of new Smart Growth planning tools, developing and implementing a performance-based capital planning and programming system, leading organizational transformation, leading the Department's response to climate change and energy policy challenges, managing major legislative initiatives, and developing a new statewide long-range transportation plan. He was previously Director of Capital Investment Planning and Development, where he managed the development of the Department's $1.5 billion annual capital program for transportation, as well as managing the flow of federal and state funding for projects. He has also served as a legislative assistant in the U.S. Congress.

His previous work for WISPIRG includes support for intervention in the Stimulus program project selection process, analysis of state transportation budgets, and detailed examination of specific projects. Material from the latter effort provided significant material for WISPIRG's successful "Building Boondoggles" report.

Dr. Stout is a nationally recognized expert in transportation and land use planning, transportation and climate change, and transportation policy and legislation. He has published and spoken widely on transportation issues and produces his own "Smart Transportation Blog" (at www.mlstoutconsulting.com). He holds a BA in political science from Washington University in St. Louis and a PhD in political science from the London School of Economics.

1. Introduction

With the publication of a Draft Environmental Impact Statement, the Wisconsin Department of Transportation has taken another big step forward in its drive to widen I-94 in Milwaukee's East-West Corridor. They have dismissed, rather peremptorily, other options for the future. The purpose of this paper is not to criticize WisDOT's chosen option but to demonstrate that another option – called here the "Rehab/Transit Option" – is not only feasible, but is in fact a better choice for the future of Milwaukee's East-West Corridor. We will begin with a proposed scope of work for improvements required to reach a state of good repair and safe and reliable operation of the existing highway (the "Rehab" element). We will then propose a new high-quality rapid transit system (the "Transit" element) that will enable real 21st century mobility in the corridor.

2. Rehab

The DEIS for the I-94 corridor already contains a description of the main elements of work needed to rehabilitate the highway. Together with appropriate complementary strategies, this approach can enable I-94 in the East-West Corridor to operate safely for many years to come.

WisDOT's Rehab Option

I-94 in the East-West Corridor is a 50-year old highway, and WisDOT has identified a number of structural and operational deficiencies that they believe warrant treatment.

The DEIS states that the pavement is worn out and (according to WisDOT engineers) can no longer be resurfaced but must be totally replaced. It should be noted, however, that this assessment is "based on WisDOT's experience with other highways," and it is not clear what actual testing has been done to determine that the much less expensive resurfacing option is not reasonable in at least some locations.[1] We accept that pavement rehabilitation (or reconstruction or replacement as needed) is warranted and should be pursued.

The DEIS does not identify any structurally deficient bridges among the 34 in the corridor (17 carrying I-94, 17 carrying local roads over I-94). Presumably some rehabilitation work will be needed on some of these bridges, but the extent of those needs is not apparent.[2]

[1] DEIS, 1-11.
[2] DEIS, 1-11 – 1-13.

WisDOT has also identified a number of design elements that – in their opinion – contribute to an excessively high crash rate on the highway. The DEIS lists the following "deficient freeway design criteria":

- Horizontal curves—Several curves on I-94 have a radius and superelevation that result in design speeds less than the recommended freeway design speed.
- Vertical alignment—One study area location has an inadequate vertical grade.
- Stopping sight distance—There are several locations where existing design speed is less than the minimum recommended design speed based on stopping sight distance.
- Decision sight distance—There are eight locations that do not meet minimum standards for decision sight distance.
- Cross section—The inside shoulder width along I-94 does not meet standards. Shoulder widths on all service interchange ramps and three ramps in the stadium interchange do not meet guidelines.
- Vertical clearance—There are 16 bridges in the study area with inadequate vertical clearance.
- Ramp spacing—There are 12 locations in the study area where minimum ramp spacing is not provided, causing unsafe weaving movements.
- Left-hand entrances and exits—There are 10 locations where left-hand ramps combined with closely spaced service interchanges create unsafe situations.
- Ramp taper rates—There are 18 locations where the ramp taper rate does not allow for adequate merging distance.
- Acceleration and deceleration lanes—There are 10 entrance and exit ramps that have inadequate acceleration and deceleration lengths.[3]

Although this catalog of design "deficiencies" is useful, these items do not in themselves require treatment for reasons of safety. In fact, the DEIS does a poor job of identifying and describing the safety problems that WisDOT apparently feel should be addressed in the corridor. Specifically:

- The DEIS argues that a project is needed in the corridor because the crash rate in segments is higher than on comparable roads.[4] These numbers certainly merit a closer safety analysis, but the mere fact of higher crash rates does not automatically identify problems or solutions.
- They vaguely connect "congestion" with safety and assert that a wider road will reduce crashes. Some crashes (especially rear-end collisions) may be associated with congested travel conditions, but what proportion of crashes would be affected is not made clear. And in fact some crashes may be made worse – possibly an increase in fatalities and serious injury accidents – by higher speeds.

[3] DEIS, 1-13 – 1-14.
[4] DEIS, 1-9 – 1-10.

- Although there is a general catalogue of crash types, these are not analyzed in any detail.[5] What are the percentages? How are they distributed by time of day (fatals, for instance, are probably more likely at night time and in free flow conditions)? What is the correlation between crashes and weather? Or special events (*e.g.*, baseball traffic)? The 1996 DEIS for the corridor at least provided a table of crash locations with suggested causes and remedies.
- Some of the identified substandard (by current standards) design features are quite likely related to crash histories, but the connections are not specifically made.

A safe and reliable I-94 that is in a state of good repair is a key component of a successful 21st century transportation network in the East-West Corridor and in the metropolitan region. WisDOT's Draft Environmental Statement for the corridor – although intended to justify a freeway widening – outlines the elements of a better rehabilitation option.

The Spot Improvements Option would "replace the freeway's pavement and bridges in or close to their existing configuration, while addressing safety issues that can be fixed with little or no new right-of-way acquisition." The listed possible spot improvements include:

- Add auxiliary lanes between Hawley Road and 68th Street.
- Eliminate the left-hand exits/entrances at Mitchell Boulevard and replace with right-hand exits.
- Add a fourth lane in each direction through the cemetery segment (with narrow lanes and shoulders) and eliminate the Mitchell Boulevard interchange with I-94.
- Replace left-hand exits/entrances with right hand exits/entrances in the stadium interchange.
- Braid ramps to allow traffic to merge effectively between the stadium interchange and 35th Street, and reconfigure ramps at 35th Street to eliminate connection to Park Hill Avenue.
- Eliminate the 35th Street interchange with I-94.
- Add C-D road to eliminate weave on westbound I-94 between the 28th Street entrance ramp and the 35th Street exit ramp.
- Widen shoulders where needed (35th Street eastbound entrance ramp, eastbound I-94 between 35th Street and 27th Street, 26th Street-St. Paul Avenue exit ramp).[6]

As can be seen from this list of potential improvements, the name "Spot Improvements Option" is something of a misnomer. It should really be called the "Rehabilitation Option." Some of these potential improvements are probably excessive, but the list does provide a good starting point. The DEIS also puts

[5] DEIS, 1-10 – 1-11.
[6] DEIS, 2-33 – 2-34.

forward a "6-Lane Modernization Option." It is not clear what additional elements – over and above those listed under the Spot Improvements Option – would be included in the 6-Lane Modernization Option, but it apparently would address "short weaving distances" as well as the other items included under Spot Improvements.[7]

WisDOT concedes that most of the infrastructure, safety, and operational issues they identify on the highway can be successfully addressed under either the Spot Improvements Option or the Six-lane Modernization Option.[8] We recommend rehabilitation of I-94 in the East-West Corridor based on WisDOT's "Spot Improvements" and "Six-lane Modernization" options in the DEIS.

Complementary highway strategies

In the DEIS for the East-West Corridor, WisDOT identifies various Transportation System Management (TSM) and Transportation Demand Management (TDM) measures that can be implemented to improve traffic flow on I-94.[9] Most of these make sense and should be pursued. We particularly recommend further analysis of the recommendation for "Arterial street and highway traffic management":

> Improve the operation and management of the regional surface arterial and highway network through improved traffic signal coordination, intersection traffic engineering improvements, curb-lane parking restrictions, access management, and advisory information.[10]

Better performing arterials can play a critical role in diffusing traffic through the roadway network, providing alternatives in case of incidents and traffic problems, and improving redundancy and resiliency for extreme weather events and other emergency situations. Improving arterials should *not* mean converting them into high-speed, semi-freeway facilities. Rather, highway and urban designers should collaborate to upgrade these streets into multi-purpose boulevards, with upgraded signals, better sidewalks, more intensive transit, some widening where needed, and building "missing links" to connect them better into the street grid and to I-94. Critical roads that should be looked at for this purpose in the East-West Corridor include Wisconsin Avenue, Bluemound Road, Canal Street, National Avenue, and Greenfield Avenue.

3. Transit

Mobility in the 21st century will take many forms. Private automobiles (perhaps self-driving!) will be in use for many years to come. New technologies are already

[7] DEIS, 2-34.
[8] DEIS, 2-47.
[9] DEIS, 2-23 – 2-24.
[10] DEIS 2-23.

bringing new options (such as Uber) to the urban traveler. Better urban design will permit more people to walk or ride bikes to more destinations. But the core system for urban mobility will be public transportation. We will outline here a proposed transit system that will not only relieve congestion on I-94 and other roads but can meet the mobility needs of the East-West Corridor for years to come.

System design

Designing a new rapid transit system is a long and complex process, involving planning, engineering, and technical studies. The East-West Corridor transit system described here is not a product of such a comprehensive process. It is a concept plan only – a concept plan that hopefully demonstrates what a high-quality 21st century rapid transit system could look like in the corridor and how it could dramatically improve mobility in a way that is sustainable, supports economic development, and promotes a high quality of life for the citizens of Milwaukee and the region.

The design philosophy used to devise this system can be described as serving major current and potential activity centers, linking them along logical routes, and positioning those routes to serve major travel demand corridors.[11] This approach is contrary to another common practice – especially prevalent in times of very limited budgets – of looking for available low-cost corridors, such as abandoned rail lines or (worse) existing freeways and hoping that a transit line there will come close to someplace someone wants to go. A transit station is best placed in or right next to an activity center, within easy walking distance of most places that most people want to go there. Getting the best access often means putting the transit line in a tunnel, which is very expensive. However, reasonably good access may also be achieved via a local street. For the purpose of this report, we have located stations at the best location. In practice, compromises will need to be made, at least initially. The network should be thought of as an evolving system, that can be expanded and upgraded by degree.

An important question facing the developer of a transit system is selection of the most appropriate technology. Should it be heavy rail, light rail, streetcar, bus rapid transit, or something else? Choice of vehicle type affects where the system can go (street running possible?), how much it will cost, and what the look and "branding" of the system will be. It is obviously premature to attempt to address that question in this report. What is important for now is to assume a system that can have high-quality station location but can also run on streets. For sake of simplicity, we will call it "light rail," although the actual technology used could be light rail, bus rapid transit, streetcar, or a combination of technologies. A good visualization of what a

[11] The theory behind these principles is set forth in Jarrett Walker, *Human Transit: How clearer thinking about public transit can enrich our communities and our lives*, Washington, DC, Island Press, 2012.

first-class system could look like is the Strasbourg Tram in Strasbourg, France. This system is essentially a modern streetcar, capable of running in the narrow streets of the city center, yet running at higher speeds on dedicated right of way further out. Some of the streetcar options shown in the Milwaukee Streetcar plan may be capable of this kind of performance.

These technologies can also be phased over time. For instance, it may make sense to start a line as a bus rapid transit line, gradually build infrastructure to put some segments into tunnel and get closer to "target" major activity centers, electrify other segments over time, and eventually track the whole line for light rail transit.

The East-West Corridor lines proposed here would presumably fit into a larger network of lines tying together the city, suburbs, and region. We have not attempted to suggest what that system would look like, although we have noted where some linkages could be made.

At the eastern end of the corridor, our rapid transit lines would bring passengers into downtown Milwaukee. Since concept planning for transit in downtown has already been done as part of the Milwaukee Streetcar project, in this proposal we take the East-West Corridor lines to the Streetcar network (at Wisconsin Center) and leave further work on integrating the systems for the future.

The overall system design can be seen on the Route Map at the end of this paper.

Red Line

The Red Line follows an east-west alignment, south of and parallel to I-94, generally along Canal Street, National Avenue, and Greenfield Avenue. Much of the route could be at-grade, with "street running" cars. This line is *not* represented in the 1982 Transit Plan (*A Primary Transit System Plan for the Milwaukee Area*) or the 2006 Regional Transportation Plan, although National Avenue is shown as a possible extension route on the Milwaukee Streetcar map. The Red Line would connect several regional major activity centers and would terminate initially at a park-and-ride station near I-894. An extension toward Waukesha would be considered in future planning.

Wisconsin Center (N. 4th and W. Wisconsin)
This downtown convention center is a likely crossing point for the Red and Green lines. The Red Line follows the north-south path along 4th Street planned in the Milwaukee Streetcar proposal. The actual interface with the Streetcar would require further planning.

Milwaukee Intermodal Center (N. 5th and W. St. Paul)
The Intermodal Center provides service for Amtrak and intercity and local buses – and future regional rail – and is the hub of the regional public transportation system.

Harley Museum (6th and W. Canal)
The museum is one of the city's prime tourist attractions, located in an area with good transit-oriented redevelopment potential.

Casino (16th and W. Canal)
The Potawatomi Hotel and Casino is another prime tourist attraction in an area with redevelopment potential.

Mitchell Park (S. Layton Blvd in the vicinity of the western ("Domes") entrance to the park)
Mitchell Park, with its iconic Domes, is another major cultural and recreational attraction.

Silver City (S. 35th and W. National)
This station would serve the Silver City neighborhood. The location has been identified as a possible station on the Milwaukee Streetcar extensions map. From here, the Purple Line heads northwest through Miller Park, joining the Green Line at Hawley Road.

Zablocki VA Center (W. National in the vicinity of the VA Center main entrance)
The VA center is one of Milwaukee's major employers, drawing thousands of visitors each year.

West Milwaukee (S. 60th and W. Washington)
A station in this general area would serve surrounding residential neighborhoods.

West Allis Industrial (S. 70th and W. Washington)
The former Allis-Chalmers site is home to Siemens Infrastructure and other industrial and high-tech employers, as well as the Milwaukee Area Technical College. Downtown West Allis is nearby.

State Fair Park (W. Greenfield in the vicinity of the main entrance)

The State Fair Park is home to the Wisconsin State Fair, the Wisconsin Expo Center, the Milwaukee Mile Speedway, and the Pettit National Ice Center.

92d Street (S. 92d and W. Greenfield)
This station would serve local neighborhoods.

101st Street (S. 101st and W. Greenfield)
This station would serve as the terminus of the Red Line, with a park-and-ride facility serving I-894. Intensive transit-oriented development may be possible. A possible future extension toward Waukesha should be considered.

Green Line

The proposed Green Line follows an east-west alignment, north of and parallel to I-94. From downtown Milwaukee, the route follows Wisconsin Avenue and Bluemound Road before turning northwest to the Milwaukee Regional Medical Center and Wauwatosa. The route along Wisconsin Avenue, east of 44th Street, follows the alignment of the "starter" light rail line proposed in the 1982 Primary Transit System Plan and is also designated as a future extension in the Milwaukee Streetcar plan. West of 44th Street, the Green Line would follow in the general path of the proposed fourth light rail extension in the 1982 plan. Unlike the 1982 plan, which would follow an abandoned light rail right-of-way between I-94 and Bluemound Road, we propose using Bluemound Road itself, whose general development characteristics are more congenial to transit use. The Wisconsin Avenue and Bluemound Road segments could largely be at grade within the roadway. West of 76th Street, the alignment would probably need considerable grade separation, bending to the northwest to serve the Milwaukee Regional Medical Center, then on to the Mayfair Mall and a park-and-ride terminal station near the Zoo Freeway. The current Regional Transportation Plan also includes this general alignment as a potential "express transit bus guideway/light rail line" for the future. The RTP alignment follows the railroad right-of-way north of Bluemound Road (missing service to several residential neighborhoods), turns southwest to serve the Regional Medical Center, and then continues on toward Waukesha. In our proposal, service in the direction of Waukesha would be carried by the Red Line.

Wisconsin Center (N. 4th and W. Wisconsin)
This downtown convention center is a likely crossing point for the Red and Green lines. The Green Line follows Wisconsin Avenue, probably initially at grade. Both the 1982 Transit Plan and the 2006 Regional Transportation Plan continue the route eastward from here along Wisconsin Avenue, which is beyond the scope of this proposal.

9th Street (N. 9th and W. Wisconsin)

This would be a downtown station near the Central Library. The station is also in the 1982 starter line plan.

Marquette East (N. 12th and W. Wisconsin)
Located at the eastern end of the Marquette campus, this station is also in the 1982 starter line plan.

Marquette West (N. 16th and W. Wisconsin)
Located at the western end of the Marquette campus (also in the 1982 starter line plan).

Avenues West (N. 27th and W. Wisconsin)
This station serves the Avenues West neighborhood (also in the 1982 starter line plan).

Merrill Park (N. 35th and W. Wisconsin)
This station serves the Merrill Park neighborhood (also in the 1982 starter line plan).

Miller Valley (N. 44th and W. Wisconsin)
Orange Line service splits off from here to the south to Miller Park and the Red Line. The Miller Valley station serves the Miller-Coors brewery area, and could connect with a regional/commuter rail station serving the Milwaukee-Madison route. This station is also in the 1982 starter line plan. Future Orange Line service could continue to the north along the "starter line" alignment toward Sherman Boulevard and north Milwaukee.

Hawley Road (N. Hawley Road and W. Bluemound Road)
This is a neighborhood station.

68th Street (68th and W. Bluemound Road)
This is a neighborhood station, which also serves visitors to Our Lady of Fatima Shrine.

76th Street (76th and W. Bluemound Road)
This is a neighborhood station.

Regional Medical Center (N. 92d and N. Connell)
This station serves the region's largest medical center, home to Milwaukee Regional Medical Center, Froedtert Hospital, and other hospitals, clinics, and medical offices. The medical complex is one of the region's largest employment centers.

Mayfair (N. Mayfair and W. North)
The station serves the Mayfair Mall (the region's largest) and adjacent commercial areas.

Burleigh (W. Burleigh and N. 119th)
The Burleigh station would be the terminus of the Green Line, with a park-and-ride facility serving U. S. 45 (Zoo Freeway). Transit-oriented development opportunities may be present.

Orange and Purple Lines

The basic form of most urban rapid transit systems is a set of radial routes that connect suburbs and outlying neighborhoods to the regional core. To be a real *network*, however, that accommodates the needs of people traveling in various directions, these lines need to be tied together with connecting (sometimes called "crosstown") lines. In our proposed system, the Red and Green lines are connected by the Orange and Purple lines at Miller Park. Leaving downtown Milwaukee, the Orange Line follows the Green Line as far as Miller Valley station, then cuts southward to Zablocki VA station, then follows the Red Line westward. The Purple Line pursues a complementary course. From downtown, it follows the Red Line westward, turns north after Silver City station, connects with the Green Line at Hawley Road station, then follows the Green Line westward. The Orange and Purple lines cross at Miller Park, which becomes a major connecting point in the system as well as a major development opportunity. The two lines would need to be mainly on grade separated right of way in their crossover segments. In the future, the Orange Line could be extended northward from Miller Valley station to follow the course of the proposed northwest line in the 1982 Transit Plan.

Miller Park (vicinity of the main entrance to the ballpark)
Miller Park is the Orange and Purple line connecting station, serving both the ballpark and the proposed Ballpark Village.

Ballpark Village

Good rapid transit can be a catalyst for high quality urban development and redevelopment. "Transit-oriented development," as it is called, is characterized by relatively dense, mixed-use, walkable and bikeable development focused on the station area. These "TOD" centers are magnets for high-end retail, residential, entertainment, and commercial development, and their amenities and urbane lifestyle draw thousands of Millennials (and Baby Boomers) to live, work, and visit there.

The East-West Corridor rapid transit lines proposed here offer may opportunities for transit-oriented development, but the greatest opportunity lies at Miller Park. Many cities have found that baseball stadiums can be excellent levers of urban redevelopment. They bring people to the stadium location – many using new or upgraded transit systems – and encourage bars, restaurants, shops, and eventually residential and commercial development. Successful ballpark-related development can be seen at Baltimore, San Diego, Chicago (Wrigley Field), Washington, DC, and elsewhere.

Milwaukee has so far failed to seize the opportunity of using its ballpark to drive redevelopment. In fact, Miller Park looks far more like a suburban-style ballpark, oriented completely to the automobile, served by freeways and surrounded by vast surface parking fields. A transit station at Miller Park, as proposed here, would enable the transformation of the area into a major new urban neighborhood. The surface parking lots would be replaced by mid-rise residential, commercial, retail, and entertainment centers, with walkable streets and a new urban lifestyle. Baseball fans would still be welcomed and would energize the street life. Their cars (not everyone would use transit) would be accommodated in parking garages, which would also serve daytime office parking demand.

One model that gives an idea of what Milwaukee's ballpark area development could look like is Ballpark Village in St. Louis. Adjacent to Busch Stadium in downtown St. Louis (and served by a light rail station), Ballpark Village is a $650 million development project covering 10 acres (7 city blocks). When completed, it will contain 250,000 square feet of commercial/retail/entertainment development, 450,000 square feet of office development, and 400 residential units.

Milwaukee Streetcar

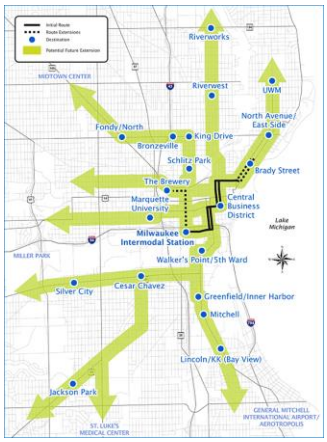
The city of Milwaukee is moving forward with the Milwaukee Streetcar project, committing $114 million in local and federal funds to build a 2-mile starter system. The proposed East-West transit system and the Milwaukee Streetcar can and should add value to each other, but ensuring that the two systems work together harmoniously will require careful planning.

Although that planning cannot be done in this report, we can suggest three ways in which the two systems could be integrated:

1. The Streetcar Extensions plan – The Milwaukee Streetcar has been planned to be – at least in its initial phases – primarily a downtown circulator. However, as noted in this report, future extensions have been sketched out, including some that would follow in part the proposed alignment of the East-West lines. It would be possible to plan and build the East-West lines as extensions of the Milwaukee Streetcar, provided the vehicles and operating

systems of the Streetcar were robust and fast enough to serve longer corridors.

2. The Two Systems plan – The Milwaukee Streetcar could be kept as a downtown circulator, with longer corridors being served by other technology (bus rapid transit or light rail transit), connecting at key nodes such as the Milwaukee Intermodal station.
3. The Phased Extensions plan – The East-West lines could be built originally with lower-cost bus rapid transit technology, interfacing with the Streetcar at key nodes, but upgraded over time into high-level streetcar service, perhaps something like the Strasbourg Tram.



4. Implementation

Building a new set of transportation infrastructure in Milwaukee's East-West Corridor – and restoring the existing legacy highway infrastructure – will be expensive and will take years to complete. Unlike WisDOT's outmoded highway designs, however, this proposed investment will pay dividends for generations to come.

It is not possible at this stage of the process to provide an accurate cost estimate for the proposed East-West transit system. In general, light rail (tracked and electrified) systems cost much more than bus rapid transit systems. Tunneling and construction of underground stations also add a great deal to the cost. Typically, new systems are built in stages, to spread the cost and construction impact over time. It is also possible to build initial stages with lower price points: perhaps first-stage bus rapid transit (BRT) to be replaced ultimately by higher-cost, full-scale light rail transit (LRT).

The most recent "New Starts" report from the Federal Transit Administration[12] provides some samples for comparison:

- The new East Bay Busway in Oakland, California, will extend 10 miles with 34 stations, mostly on exclusive lanes, and is estimated to cost a total of $178 million.
- The El Camino Real BRT system in the San Jose, California area will extend 17 miles with 16 stations at a cost of $188 million.
- The Central Corridor Light Rail Line in Minnesota, connecting downtown Minneapolis and downtown St. Paul, will extend 10 miles and cost $957 million.

[12] http://www.fta.dot.gov/documents/FY15_Annual_Report_3_3_14_final.pdf.

- At the high end, the Baltimore Red Line (light rail) will travel from east to west through downtown Baltimore for 14 miles with 19 stations and is expected to cost $2.645 Billion.

It is important to note that the savings from reducing the scope of the I-94 widening project *can* be used to advance the Rehab/Transit Option. Unfortunately, this issue has been clouded by statements from the project sponsor that give a false impression about funding choices available to Wisconsin. Specifically, the Spring 2014 project newsletter states (in the text box "Frequent Topics of Conversation: Local Road Improvements"):

> Money used to fund freeway improvements cannot be used to maintain local roads. If WisDOT and the Federal Highway Administration (FHWA) choose a lower cost alternative for the I-94 corridor, the additional money or cost savings cannot be used for local roads under current WisDOT and FHWA policy and by Wisconsin statute.[13]

This statement is misleading on several levels:

- First, no funding source for this project has actually been selected, and a variety of federal and state funding sources could be used.
- Second, it is uncertain – at best – how federal funding categories will be structured when the East-West Corridor (whatever the project looks like) is ultimately ready for funding.
- Third, capital programmers – the people at WisDOT and SEWRPC who put the TIP together – have a wide range of options in matching projects and funding categories.
- Fourth, if the region's project priorities can't be fit into the available balances in federal funding categories, funds can be *transferred* from one funding category to another, including from highway programs to transit.

We recommend the following steps to advance the Rehab/Transit Option:

1. Revise the Draft Environmental Impact Statement for the East-West Corridor with the Rehab/Transit Option as the Locally Preferred Alternative.
2. Advance the Rehab plan as a set of downsized projects that can be implemented over time.
3. Initiate detailed planning to link the Milwaukee Streetcar project with the East-West Corridor Transit plan.
4. Restart planning for a regional rapid transit system.
5. Start neighborhood planning work at proposed East-West rapid transit locations.
6. Seek federal discretionary funding (*e.g.*, TIGER grants) to advance the Rehab-Transit Option.

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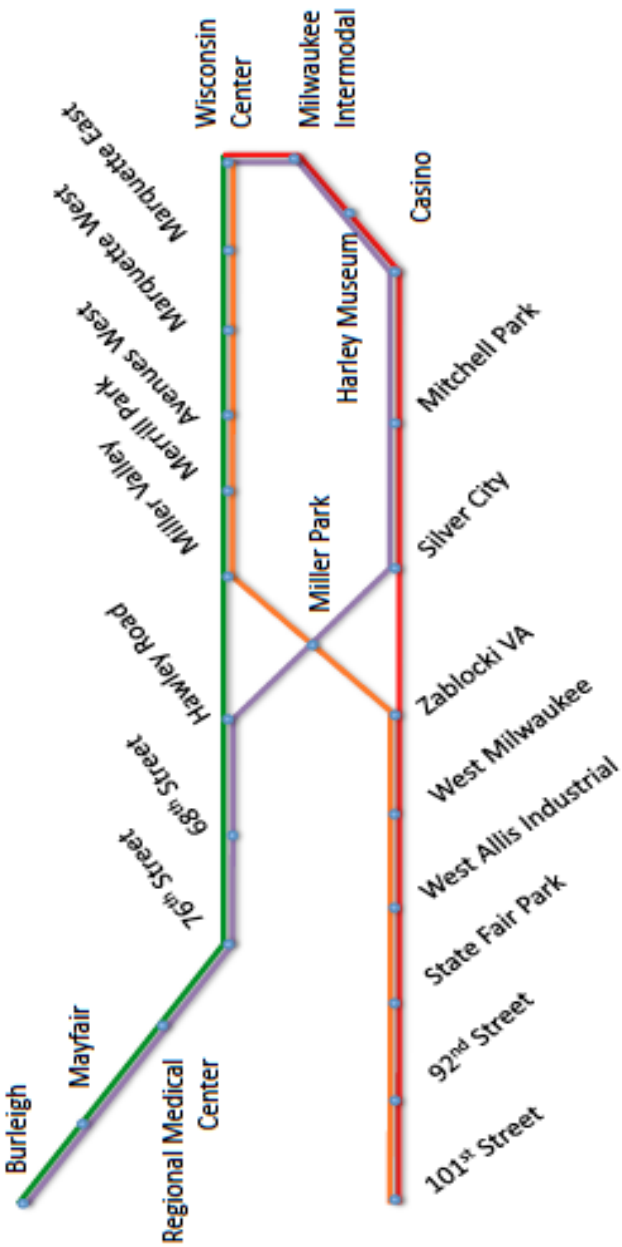
[13] http://www.dot.state.wi.us/projects/seregion/94stadiumint/docs/nl-2014may.pdf.


Wisconsin Center
Milwaukee Intermodal
Marquette East
Marquette West
Casino
Harley Museum
Avenues West
Merrill Park
Mitchell Park
Miller Valley
Silver City
Miller Park
Hawley Road
Zablocki VA
68th Street
West Milwaukee
76th Street
West Allis Industrial
State Fair Park
Mayfair
92nd Street
Burleigh
Regional Medical Center
101st Street

Proposed East-West Corridor Rapid Transit Route Map